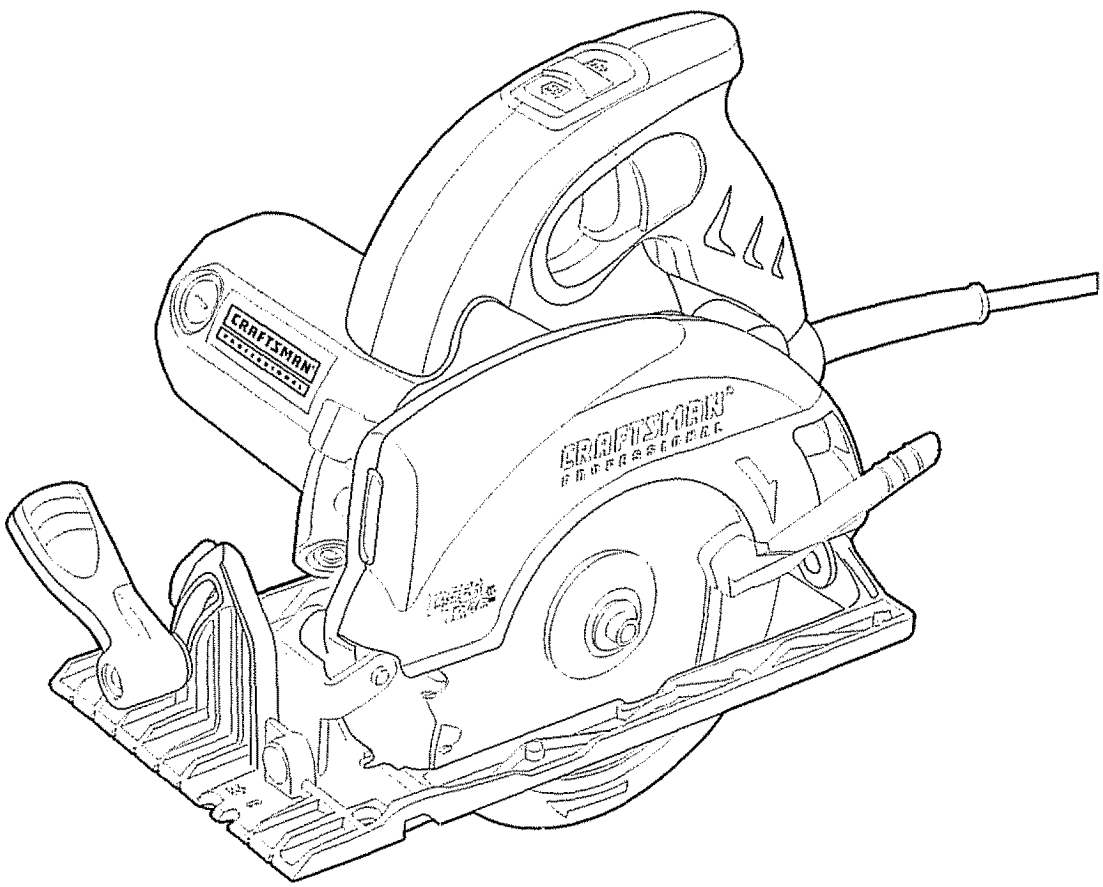
Product Manual

CRAFTSMAN®

5-1/2-in. Circular Saw

Model No. 320.28191



⚠ **CAUTION! Read, understand and follow all Safety Rules and Operating Instructions in this Manual before using this product.**

- Warranty
- Safety
- Operation
- Maintenance

Sears, Roebuck and Co., Hoffman Estates, IL 60179

www.craftsman.com

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ONE YEAR FULL WARRANTY ON CRAFTSMAN® PRODUCT

If this Craftsman tool fails to give complete satisfaction within one year from the date of purchase, return it to any Sears store or other Craftsman outlet in the United States for free replacement.

This warranty does not include parts, such as saw blades,that can wear out from normal use within the warranty period.

This warranty applies for only 90 days from the date of purchase if this product is ever used for commercial or rental purposes.

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

Sears, Roebuck and Co., Hoffman Estates, IL 60179

⚠ **WARNING:** Some dust created by using power tools contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

SAVE THESE INSTRUCTIONS!

READ ALL INSTRUCTIONS!

SAFETY SYMBOLS

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols, and the explanations with them, deserve your careful attention and understanding. The symbol warnings **DO NOT** by themselves eliminate any danger. The instructions and warnings they give are no substitutes for proper accident prevention measures.

⚠ **WARNING:** BE SURE to read and understand all safety alert symbols such as "DANGER," "WARNING," and "CAUTION" BEFORE using this product. Failure to follow all instructions may result in electric shock, fire, and/or serious personal injury.

SYMBOL MEANINGS

⚠ **SAFETY ALERT SYMBOL:** Indicates DANGER, WARNING, OR CAUTION. May be used in conjunction with other symbols or pictographs.

⚠ **DANGER:** Failure to obey this safety warning **WILL** result in death or serious injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock and personal injury.

⚠ **WARNING:** Failure to obey this safety warning **CAN** result in death or serious injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock and personal injury.

⚠ **CAUTION:** Failure to obey this safety warning **MAY** result in personal injury to yourself or others or property damage. Always follow the safety precautions to reduce the risk of fire, electric shock and personal injury.

DAMAGE PREVENTION AND INFORMATION MESSAGES

These inform the user of important information and/or instructions that could lead to equipment or other property damage if they are not followed. Each message is preceded by the word "**NOTE**," as in the example below:

NOTE: Equipment and/or property damage may result if these instructions are not followed.

⚠ **WARNING:** The operation of any tool with a circular blade can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power tool operation, ALWAYS wear safety goggles or safety glasses with side shield and a full-face shield when needed. We recommend a Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shield, available at Sears Stores or other Craftsman Outlets.

Some of these following symbols may be used on this tool. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the tool better and more safely.

SYMBOL	NAME	DESIGNATION / EXPLANATION
V	Volts	Voltage
A	Amperes	Current
Hz	Hertz	Frequency(cycles per second)
W	Watt	Power
min	Minutes	Time
~	Alternating Current	Type of current
⎓	Direct Current	Type or a characteristic of current
n_0	No Load Speed	Rotational speed, at no load
⧈	Class II Construction	Double-insulated construction
.../min	Per Minute	Revolutions, strokes, surface speed, orbits, etc., per minute
	Wet Conditions Alert	Do not expose to rain or use in damp locations.
	Read the Product Manual	To reduce the risk of injury, user must read and understand product manual before using this product.
	Eye Protection	Always wear safety goggles or safety glasses with side shields and a full-face shield when operating this product.
	Safety Alert	Precautions that involve your safety.
	No Hands Symbol	Failure to keep your hands away from the blade will result in serious personal injury.
	No Hands Symbol	Failure to keep your hands away from the blade will result in serious personal injury.
	No Hands Symbol	Failure to keep your hands away from the blade will result in serious personal injury.
	No Hands Symbol	Failure to keep your hands away from the blade will result in serious personal injury.
	Hot Surface	To reduce the risk of injury or damage, avoid contact with any hot surface.

SAFETY INSTRUCTIONS

⚠ **WARNING:** BE SURE to read and understand all instructions in this product manual. Failure to follow all instructions may result in electric shock, fire and/or serious personal injury.

⚠ **WARNING:** All repairs should be performed by a qualified service technician at a Sears Service Center to ensure safety and reliability.

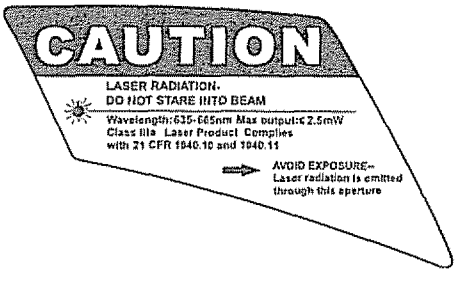
Before using the circular saw, read the accompanying Safety Instructions carefully and thoroughly, and keep all of the documents supplied with the tool in a safe place.

SAFETY PRECAUTIONS FOR LASERS

⚠ **WARNING:** Always follow the instructions contained in this manual when using the laser. Use of this feature in any manner other than that which appears in this manual may result in a hazardous radiation exposure.

This circular saw has a built-in laser light. The laser is a Class IIIa and emits output power of a maximum 2.5mW and 635-665nm wavelengths. These lasers do not normally present an optical hazard. However, **DO NOT** stare at the beam as this can cause flash blindness.

The label opposite is on your tool. It indicates the location from which the saw emits the laser light. BE AWARE of the laser light location when using. ALWAYS MAKE SURE that any bystanders in the vicinity of use are made aware of the dangers of looking directly into the laser.



⚠ **WARNING:** LASER LIGHT. LASER RADIATION. Avoid Direct Eye Exposure. DO NOT stare into beam. Only turn laser beam on when the saw is on the workpiece. Class IIIa laser.

⚠ **WARNING:** Use of controls, adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

⚠ **WARNING:** The use of optical instruments such as, but not limited to, telescopes or transits to view the laser beam will increase eye hazard.

1. **Do not remove or deface any product labels.** Removing product labels increases the risk of exposure to laser radiation.
2. **Avoid direct eye exposure.** The laser beam can be harmful to eyes Do not look directly into the laser-beam-output aperture during operation. Do not project the laser beam directly into the eyes of bystanders. Turn the laser on only when making cuts.
3. **The laser on the saw is not a toy.** Always keep it out of the reach of children. The laser light emitted from this device should never be directed towards any person for any reason.

4. **Be sure the laser beam is aimed at a work piece that does not have a reflective surface,** such as wood or a rough-coated surface. Reflective surfaces can reflect the laser light into your eyes, causing flash blindness.
5. **Do not use on surfaces** such as sheet steel **that have shiny, reflective surfaces.** The shiny surface could reflect the beam back at the operator. Be aware that laser light reflected off a mirror or any other reflective surface can be dangerous.
6. **Always turn the laser beam off when not in use.** Leaving the tool on increases the risk of someone inadvertently staring into the laser beam.
7. **Do not attempt to modify the performance of this laser device.** This may result in a dangerous exposure to laser radiation.
8. **Use only accessories that are recommended by Sears.** Use of other accessories that have been designed for use with other laser tools could result in serious injury.
9. For further information regarding lasers, refer to ANSI-Z136.1, the standard for the safe use of lasers, available from the Laser Institute of America (407) 380-1553.

WORK AREA SAFETY

1. **Keep the work area clean and well lit.** Cluttered benches and dark areas invite accidents.
2. **Don't use in a dangerous environment.** Don't use power tools in damp or wet locations or expose them to rain. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.
3. **Operate the tool in well-ventilated areas,** and provide proper dust removal. Dust generated from some materials can be hazardous to your health. Use dust-collection systems whenever possible.
4. **Keep children and bystanders away** while operating a power tool. Distractions cause you to lose control.
5. **Use the right tool.** Don't force a tool or attachment to do a job for which it was not designed.
6. **Make the workshop kid-proof** with padlocks, master switches, or by removing starter keys.

ELECTRICAL SAFETY

1. **Do not change the plug in any way.** This circular saw is a double-insulated tool. Double insulated tools are equipped with a polarized plug (one blade is wider than the other.) This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way.
2. **Double insulation⧈eliminates** the need for the three-wire grounded power cord and grounded power supply system. Applicable only to Class II (double insulated) tools.

3. **ALWAYS avoid body contact with grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is grounded.
4. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
5. **When operating a power tool outside, ALWAYS use an outdoor extension cord marked "W-A" or "W".** These cords are rated for outdoor use and reduce the risk of electric shock.
6. **Do not abuse the cord.** Never use the cord to carry the tools or to pull the plug from the outlet. Keep the cord away from heat, oil, sharp edges, or moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electric shock.
7. **Use the proper extension cord.**
   - Make sure that your extension cord is in good condition.
   - When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating.
   - Table A shows the correct size to use, depending on cord length and ampere rating. If in doubt, use the next heavier gauge: the smaller the gauge number, the heavier the cord.
   - When operating a power tool outdoors, ALWAYS use an outdoor extension cord marked "W-A" or "W." These cords are rated for outdoor use and reduce the risk of electric shock.

Minimum Gauge for Extension Cords				
Volts	Total Lenghth of Cord in Feet			
120V	0-25ft.	25-50ft.	51-100ft.	101-150ft.
Ampere Rating	AWG	AWG	AWG	AWG
More than 0 Not more than 6	16	16	16	14
More than 6 Not more than 10	16	16	14	12
More than 10 Not more than 12	16	16	14	12
More than 12 Not more than 16	14	12	Not Recommended	

PERSONAL SAFETY

⚠ **WARNING:** Use of this tool can generate dust containing chemicals known to the state of California to cause cancer, birth defects, or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks, cement, and other masonry products.

- Arsenic and chromium from chemically treated lumber.

Your risk from these exposures varies, depending upon how often you do this type of work. To reduce your exposure to these chemicals:

- Work in a well-ventilated area.
- Work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

Avoid prolonged contact with dust from power sanding, sawing, grinding, drilling, and other construction activities. Wear protective clothing and wash exposed areas with soap and water.

Allowing dust to get into your mouth or eyes or to lie on the skin may promote absorption of harmful chemicals.

⚠ **WARNING:** The operation of any power tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power-tool operation, always wear safety goggles or safety glasses with side shields, and a full face shield when needed. We recommend Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with shields. Always use eye protection which is marked to comply with ANSI Z87.1

1. **Stay alert, watch what you are doing and use common sense when operating a power tool.** Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
2. **Dress properly.** Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
3. **Avoid accidental starting.** Ensure the switch is in the off position before plugging in. Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.
4. **Remove adjusting keys or switches before turning the tool on.** A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.
5. **Do not overreach.** Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
6. **Use safety equipment.** Always wear eye protection. Safety equipment such as dust masks, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.
7. **Wear hearing protection** to help prevent hearing loss.
8. **Never touch the pins of the electrical plug** while inserting it into or removing it from an electrical socket.

TOOL USE AND CARE SAFETY

⚠ **WARNING:** Use of accessories that are not recommended for use with this tool may create hazardous conditions.

1. **Keep guards in place and in working order.**
2. **Avoid accidental starting.** Be sure the switch is in the "Off" position before plugging the tool into an electrical outlet.
3. **Do not carry tools with your finger on the switch.**
4. **Use clamps or another practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body leaves it unstable and may lead to loss of control.
5. **Do not over reach.** Keep proper footing and balance at all times.
6. **Do not force the tool.** Use the correct tool and blade for your application. The correct tool and blade will do the job better and more safely when used at the rate for which it is designed.
7. **Do not use tool if the switch does not turn it "ON" or "OFF."** Any tool that cannot be controlled with the switch is dangerous and must be repaired.
8. **Disconnect the plug from the power source and/or the batter pack from the power tool before making any adjustments,** changing accessories or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
9. **Store idle power tools out of the reach of children and** do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.
10. **Do not allow persons unfamiliar with the power tool or these instructions to operate this tool.**
11. **Never leave the tool running unattended;** turn the power off. Don't leave the tool until it comes to a complete stop.
12. **Always maintain tools with care.** Keep cutting tools sharp and clean. Properly maintained tools with sharp cutting edges are less likely to bind and are easier to control. Follow all instructions for lubricating and changing accessories.
13. **Check for damaged parts.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
14. **Use recommended accessories.** Consult the product manual for recommended accessories. The use of improper accessories may increase the risk of personal injury.
15. **Use the saw, blades, etc. in accordance with these instructions** and in the manner intended for the saw, as described in this manual, taking into account the working conditions and the nature of the work to be performed.

SERVICE SAFETY

1. If any part of this saw is missing or should break, bend, or fail in any way; or should any electrical component fail to perform properly: **ALWAYS** shut off the power switch and remove the plug from the power source, and have the missing, damaged, or failed part replaced **BEFORE** resuming operation.
2. All service that requires opening the tool **MUST** be performed only by a Sears Service Center. All of the motor parts are important components of the double-insulation system and **MUST** only be serviced by a Sears Service Center. Service performed by unqualified personnel could result in a risk of injury.
3. When servicing this tool, **ALWAYS** use only identical replacement parts. Follow instructions in the Maintenance Section of this manual. Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of electric shock or injury.

SPECIFIC SAFETY RULES FOR THE 5-1/2 INCH CIRCULAR SAW

⚠ **DANGER!** Keep hands away from cutting area and the blade. Keep your second hand on the auxiliary handle or motor housing. If both hands are holding the saw, the cannot be cut by the saw.

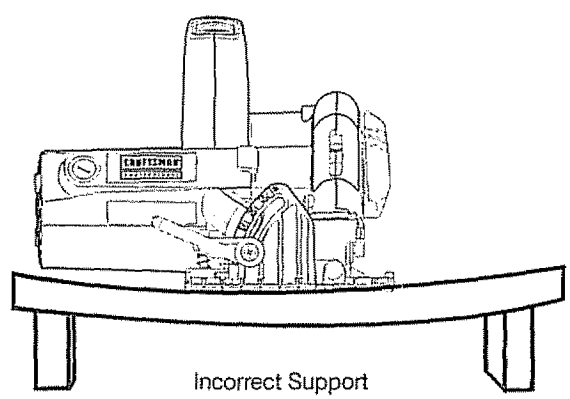
1. **Keep your body positioned to either side of the saw blade and not in direct line with the saw blade.** Kickback could cause the saw to jump backwards. See"Kickback".
2. **Check lower guard for proper closing before each use.** Do not operate saw if lower guard does not move freely and close instantly. Never clamp or tie the lower guard into the open position. If saw is accidentally dropped, lower guard may be bent. Raise the lower blade guard with the retracting handle. Make sure it moves freely and does not touch the blade or any other part, in all angles and depths of cut.
3. **Check the operation of the lower guard spring.** If the guard and the spring are not operating properly, they must be serviced before use. Lower guard may operate sluggishly due to damaged parts, gummy deposits or a buildup of debris.
4. **Hold the tool by its insulated gripping surfaces** when performing an operation where the cutting tool may contact hidden wiring or its own cord. Contact with a "live" wire will also make exposed metal parts of the tool "live" and shock the operator.
5. **Never hold piece being cut in your hands or across your leg.** Secure the workpiece to a stable platform. It is important to support the work properly to minimize body exposure, blade binding or loss of control.
6. **Lower guard should be retracted manually only for special cuts such as "pocket cut" and "compound cut."** Raise lower blade guard by retracting handle. As soon as blade enters the material, the lower guard must be released. For all other sawing, the lower guard should operate automatically.

7. **Do not reach underneath the workpiece.** The guard cannot protect you from the blade below the workpiece.
8. **Always observe that the lower guard is covering the blade before placing the saw down on bench or floor.** An unprotected, coasting blade will cause the saw to walk backwards, cutting whatever is in its path. Be aware of the time it takes for the blade to stop after switch is released.
9. **Always use a rip fence or straight edge guide when ripping.** This improves the accuracy of the cut and reduces the chance of the blade binding.
10. **Always use blades with the correct size and shape (diamond versus round) of arbor holes.** Blades that do not match the mounting hardware of the saw will run erratically, causing loss of control.
11. **Never use damaged or incorrect blade washers or bolt.** The blade washers and bolt were specially designed for your saw for optimum performance and safety of operation.

KICKBACK

1. Kickback is a sudden reaction to a pinched, bound or misaligned saw blade, causing an uncontrolled saw to lift up and out of the workpiece toward the operator.
2. When the blade is pinched or bound tightly by the kerf closing down, the blade stalls and the motor reaction drives the unit rapidly back towards the operator.
3. If the blade becomes twisted or misaligned in the cut, the teeth at the back edge of the blade can dig into the top surface of the wood causing the blade to climb out of the kerf and jump back toward the operator.

Fig. 1



Incorrect Support
support is too far from cut line

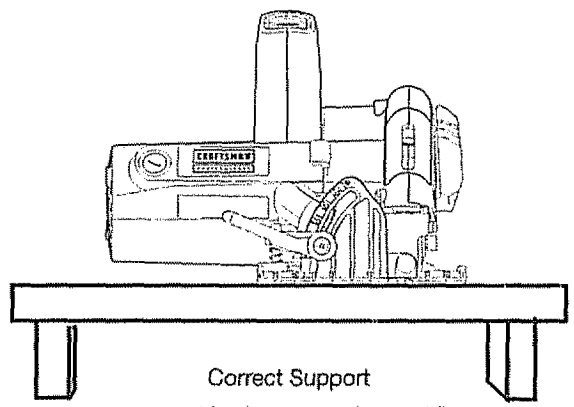
4. Kickback is the result of misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions, as given below:
5. Maintain a firm grip with both hands on the saw and position your arms to resist kickback forces. Position your body to either side of the blade, but not in line with the blade. Kickback could cause the saw to jump backwards, but kickback forces can be controlled by the operator, if proper precautions are taken.
6. When blade is binding or when interrupting a cut for any reason, release the trigger and hold the saw motionless in the material until the blade comes to a complete stop. Never attempt to remove the saw from the work or pull the saw backward while the blade is in motion or kickback may occur. Investigate and take corrective actions to eliminate the cause of blade binding.

7. When restarting a saw in the workpiece, center the saw blade in the kerf and check that saw teeth are not engaged into the material. If saw is binding, it may walk up or kickback from the workpiece as the saw is restarted.

8. Support large panels to minimize the risk of blade pinching and kickback. Large panels tend to sag under their own weight. Supports must be placed under the panel on both sides, near the line of cut and near the edge of the panel.

9. Do not use dull or damaged blades. Unsharpened or improperly set blades produce narrow kerf causing excessive friction, blade binding and kickback.

Fig. 2



Correct Support

support is close enough to cut line

10. Blade depth and bevel adjusting locking levers must be tight and secure before making cut. If blade adjustment shifts while cutting, it may cause binding and kickback.

11. Use extra caution when making a "pocket cut" into existing walls or other blind areas. The protruding blade may cut objects that can cause kickback.

GLOSSARY OF WOODWORKING TERMS

Arbor: The shaft on which the cutting tool is mounted. Bevel Cut: A cutting operation made with the blade at any angle other than 90° to the plane of the workpiece.

Chamfer Cut: A cut removing a wedge from a block of wood so that the end (or portion of the end) is angled other than 90°.

Compound Miter Cut: A cut with both a bevel angle and a miter angle.

Cross Cut: A cutting or shaping operation made against the grain of the workpiece.

Dado Cut: A non-through cut that produces a square-sided notch or trough in the workpiece (requires a special blade).

Gum: A sticky, sap-based residue from hardwoods.

Kerf: The material removed by the blade in a through cut, or the slot produced by the blade in a non-through cut or partial cut.

Kickback: A hazard that can occur when the blade binds or stalls, throwing the workpiece back towards the operator.

Miter Cut: A cutting operation made with the blade at any angle other than 90° to the fence.

Non-Through Cuts: Any cutting operation where the blade does not extend completely through the thickness of the workpiece, such as a dado cut.

Resin: A sticky, sap-based substance that has hardened.

Revolutions per Minute (RPM): The number of turns completed by a spinning object in one minute.

Ripping or Rip Cut: A cutting operation along the length of the workpiece.

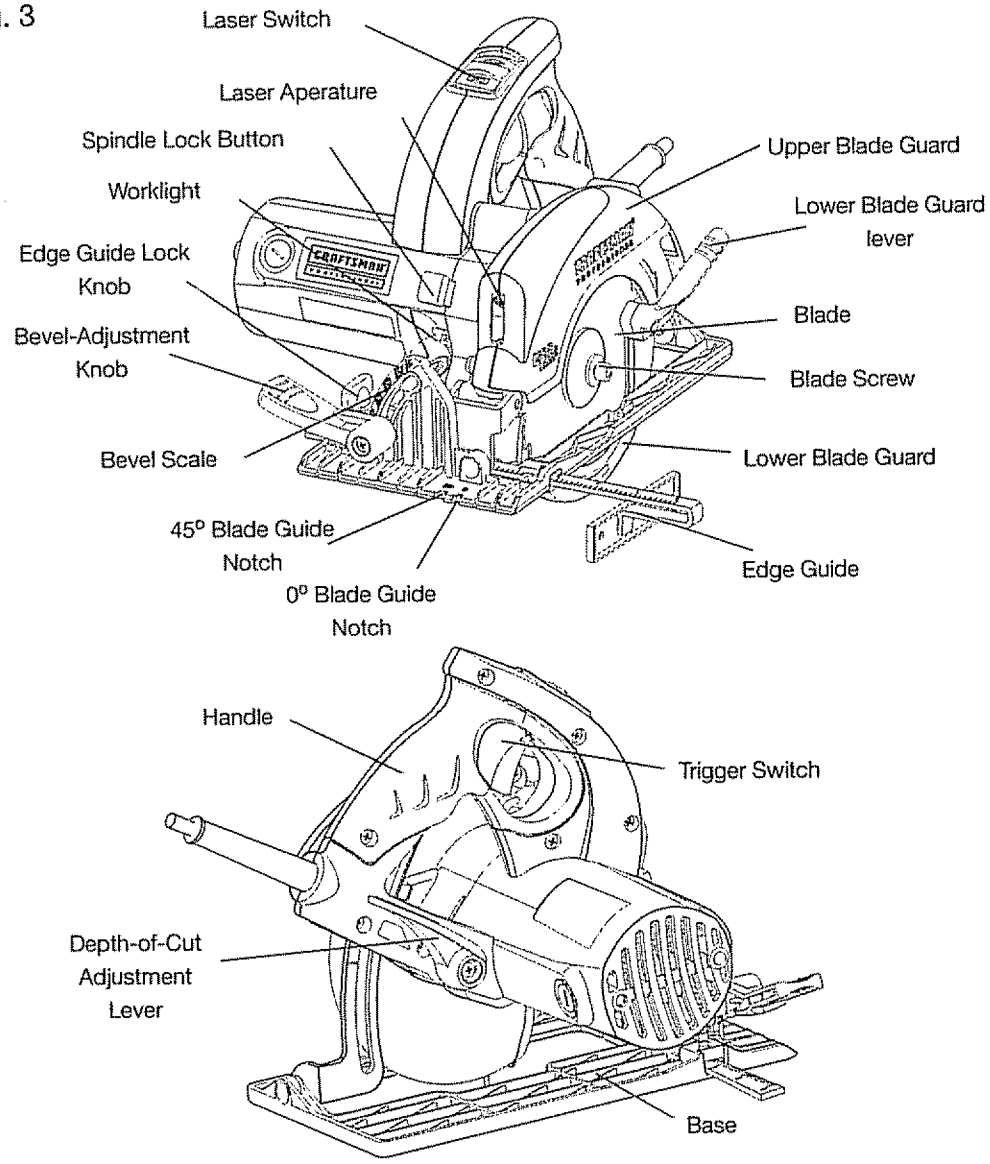
Saw-Blade Path: The area over, under, behind, or in front of the blade, as it applies to the workpiece, or the area that will be or has been cut by the blade.

Set: The distance that the saw-blade tooth is bent (or set) outward from the face of the blade.

Spindle: The shaft on which the cutting tool is mounted. Also called the Arbor.

Through Sawing: Any cutting operation where the blade extends completely through the thickness of the workpiece.

Fig. 3



PRODUCT SPECIFICATIONS	
Input	8 Amps
Rating	120V, 60Hz AC
No load Speed	4000RPM
Blade Diameter	5 1/2 in. (140mm)
Cutting Depth at 90°	1 5/8 in. (41mm)
Cutting Depth at 45°	1 1/16 in. (27mm)
Bevel	Adjustable 0° - 48°
Laser beam	Classe IIIa 635-665nm max. output≤ 2.5mW

⚠ **WARNING:** The safe use of this product requires an understanding of the information on the tool and in this product manual, as well as knowledge of the project you are attempting. Before use of this product, familiarize yourself with all operating features and safety rules.

0° TO 48° Bevel Adjustment
The bevel-adjustment lever allows you to set the trim saw for bevel cuts from 0° to 48°.

LASERTRAC™ Laser Guide
The laser guide projects a bright red line onto the workpiece, aiding in alignment and accuracy.

LED Worklight
The fixed-position LED worklight, located on the front of the saw, allows better cut-line visibility.

Edge Guide
The saw is equipped with an edge guide for accurate parallel cuts.

Spindle-Lock Button
The spindle-lock button allows you to secure the blade when turning the blade screw.

Depth-of-Cut Adjustment Lever
The depth-of-cut adjustment lever adjusts the depth of cut a maximum of 0 to 1 5/8-in. at 90° and 0 to 1 1/16-in. at 45°.

UNPACKING

⚠ **WARNING:** If any parts are broken or missing, DO NOT attempt to plug in the power cord or operate the saw until the broken or missing parts are replaced. Failure to do so could result in possible serious injury.

⚠ **WARNING:** Do not attempt to modify this saw or create accessories not recommended for use with this saw. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious injury.

⚠ **WARNING:** To prevent accidental starting that could cause serious personal injury, always disconnect the tool from the power source when assembling parts.

UNPACKING

This product has been shipped completely assembled.

1. Carefully remove the tool and the accessories from the box. Make sure that all items listed in the packing list are included.
2. Inspect the tool carefully to make sure that no breakage or damage occurred during shipping.

3. Do not discard the packing material until you have carefully inspected and satisfactorily operated the tool.
4. If any parts are damaged or missing, please contact the nearest service center.

PACKING LIST

5 1/2-in. Trim Saw, Saw Blade, Edge Guide, Hex Key, Glasses, Carbon Brush and Product Manual

OPERATION

SAW BLADES

The best of saw blades will not cut efficiently if they are not kept clean, sharp, and properly set. Using a dull blade will place a heavy load on the saw and increase the danger of kickback. Keep extra blades on hand, so that sharp blades are always available.

Gum and wood pitch that have hardened on the blades will slow the saw down. Use gum and pitch remover, hot water, or kerosene to remove these accumulations. DO NOT USE GASOLINE.

BLADE GUARD SYSTEM

The lower blade guard attached to your saw is there for your protection and safety. It should never be altered for any reason. If it becomes damaged or begins to return to position slowly, do not operate the saw until the damage has been repaired or the blade guard has been replaced. Always leave the blade guard in the operating position when using the saw.

⚠ **DANGER:** When sawing through a workpiece, the lower blade guard does not cover the blade on the underside of the workpiece. Keep hands and fingers away from the cutting area. If any part of your body comes in contact with the moving blade, serious injury will result.

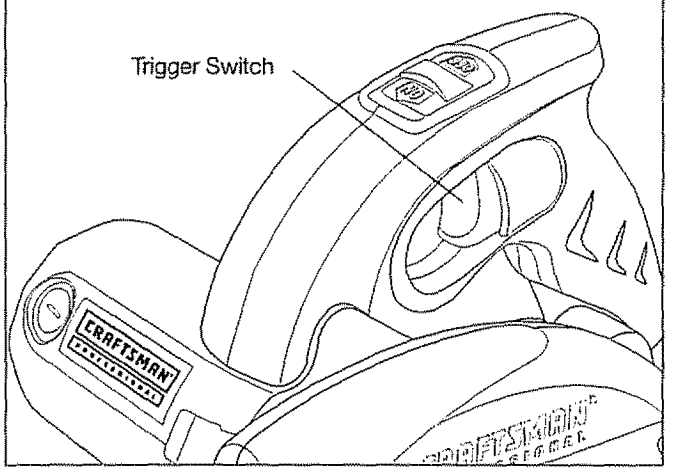
⚠ **CAUTION:** Never use the saw when the guard is not operating correctly. Check the guard for correct operation before each use. The guard is operating correctly when it moves freely, and readily returns to the closed position. If you drop the saw, check the lower blade guard and bumper for damage at all depth-of-cut settings before reuse.

STARTING/STOPPING THE SAW (Fig. 4)

To start the saw: Depress the trigger switch. Always allow the blade to reach full speed, then guide the saw into the workpiece.

To stop the saw: Release the trigger switch. After you release the trigger switch, allow the blade to come to a complete stop. Do not remove the saw from the workpiece while the blade is moving.

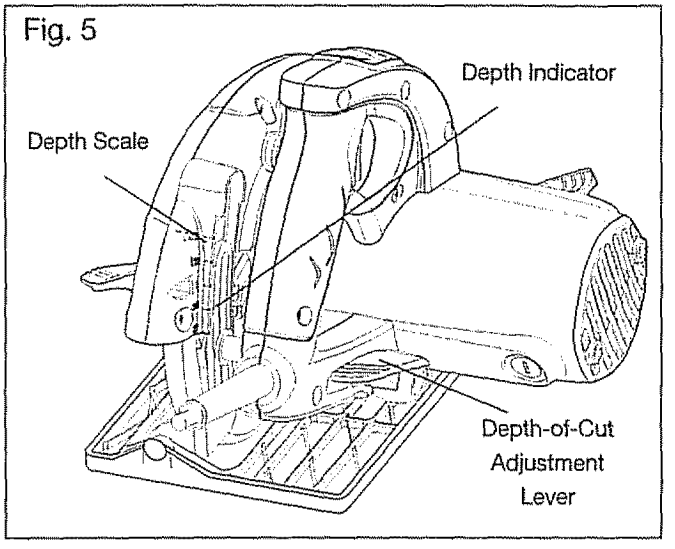
Fig. 4



DEPTH-OF-CUT ADJUSTMENT (Fig. 5)

Always keep the correct depth-of-cut setting. The correct depth-of-cut setting should not exceed 1/4 inch below the material to be cut. Only one saw-blade tooth should show beneath the material. If more than one blade tooth shows, then the depth of cut is too deep. Excessive depth of cut will increase the chance of kickback and cause the cut to be rough.

Fig. 5



TO ADJUST DEPTH OF CUT

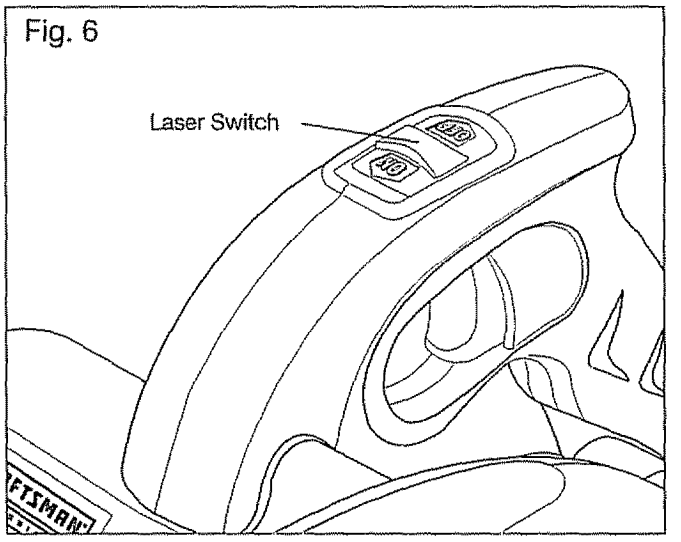
- Disconnect the saw from the power source.
- Loosen the depth-of-cut adjustment lever.
- Place the base flat on the workpiece, and raise or lower the saw until the depth-of-cut indicator aligns with the desired depth on the scale.
- Securely tighten the depth-of-cut adjustment lever.

NOTE: Make a trial cut on a piece of scrap material to ensure that the laser is aligned properly.

USING THE LASER TRAC™ LASER GUIDE (Fig. 6)

⚠ **WARNING:** LASER LIGHT. LASER RADIATION. Avoid Direct Eye Exposure. DO NOT stare into beam. Only turn laser beam on when the saw is on the workpiece. The laser is factory installed and aligned. Class IIIa laser.

Fig. 6



To operate the laser guide:

1. Disconnect the saw from the power source.
2. Mark the line to be cut on the workpiece.
3. Adjust the depth and angle of the cut as needed.
4. Plug the saw into an electrical outlet.
5. Slide the Laser switch forward to turn the laser on.
6. Start the saw.
7. Align the laser beam with the cut line, and slowly push the saw forward into the workpiece.
8. Once the cut is complete, release the trigger switch, and allow the saw to come to a complete stop.
9. Always turn laser beam off when you have finished cutting.

NOTE: Do not touch the blade to the workpiece until the saw has reached maximum speed

NOTE: Make a trial cut on a piece of scrap material to ensure that the laser is aligned properly.

USING THE LED WORKLIGHT

The saw is equipped with a fixed-position worklight for better visibility when cutting. It will be lighted for illuminating the cutting area as soon as you plug in the saw.

OPERATING THE SAW

It is important to understand the correct method for operating the saw. Refer to the instructions in this section to learn the correct and incorrect ways for handling the saw.

⚠ **DANGER:** When lifting the saw from the workpiece, the blade is exposed on the underside of the saw until the lower blade guard closes. Make sure the lower blade guard is closed before setting the saw down.

⚠ **DANGER:** To make sawing easier and safer, always maintain proper control of the saw. Loss of control could cause an accident resulting in possible serious injury.

To make the best possible cut:

- Hold the saw firmly with hand.
- Avoid placing your hand on the workpiece while making a cut.
- Support the workpiece so that the cut (kerf) is always to your side.
- Support the workpiece near the cut.
- Clamp the workpiece securely, so that the workpiece will not move during the cut.
- Always place the saw on the workpiece that is supported, not the "cut off" piece.
- Place the workpiece with the "good" side down.
- Draw a guideline along the desired line of cut before beginning your cut.

NOTE: The "good" side of the workpiece is the side where appearance is important.

Fig. 7

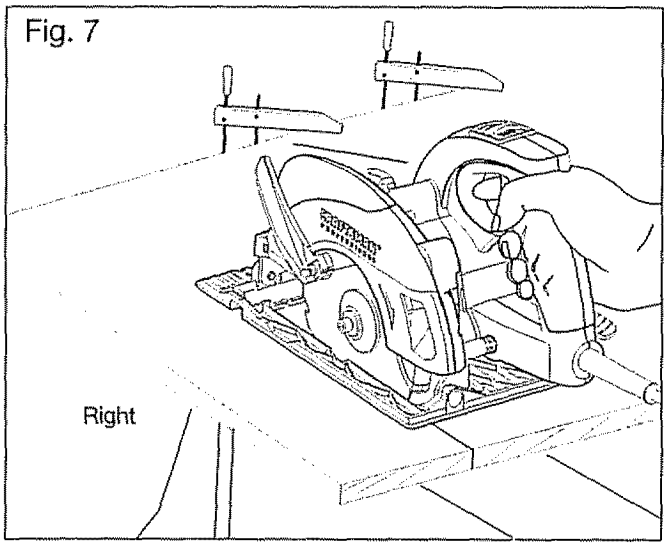
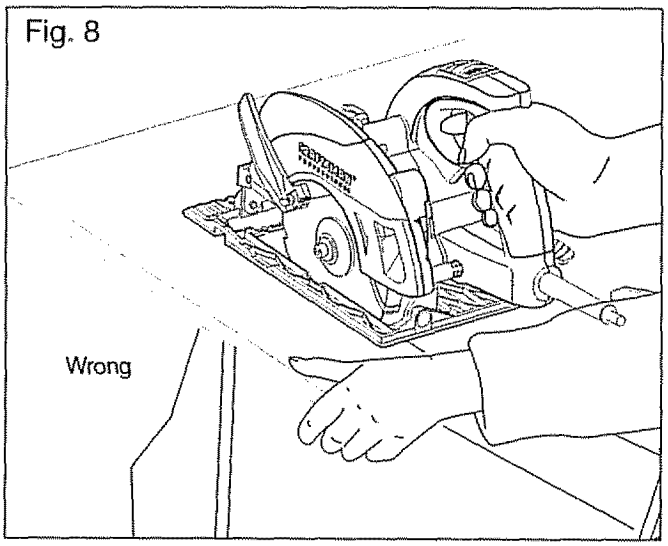


Fig. 8



⚠ **WARNING:** If the blade comes in contact with the workpiece before it reaches full speed, it could cause the saw to "kickback" towards you, which could result in serious injury.

⚠ **WARNING:** ALWAYS securely clamp and support the workpiece. ALWAYS maintain proper control of the saw. Failure to clamp and support the workpiece and loss of control of saw could result in serious injury.

MAKING CROSS CUTS AND RIP CUTS (Fig. 9)

When making a cross cut or rip cut, align your cut line with the notch marked 0° on the saw base. Since blade thicknesses vary, always make a trial cut in scrap material along a guideline to determine how much, if any, the guideline must be offset to produce an accurate cut.

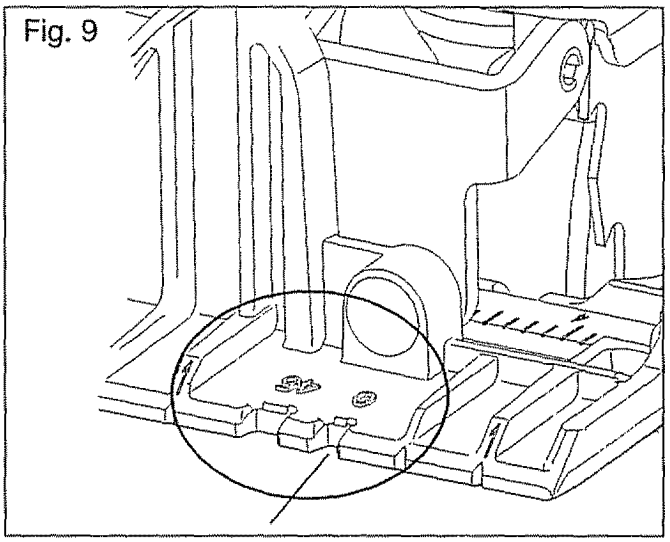


Fig. 9

Crosscut ruler

A ruler for measuring cross cuts is marked along the front of the saw base.

MAKING RIP CUTS

Always use a guide when making long or wide rip cuts with your saw. You can use either a straight edge or use the edge guide that was included with the saw.

1. Secure the workpiece.
2. Clamp a straight edge to the workpiece using C-clamps.
3. Carefully guide the saw along the straight edge to achieve a straight rip cut.

EDGE GUIDE

The saw comes with an edge guide. It allows you to make accurate parallel cuts when trimming a workpiece. The edge guide attaches to the saw base and is secured in place with a turn screw. The arm of the edge guide is stamped with a scale from 0 to 9 inches in 1/8-inch increments for easily adjusting your cut.

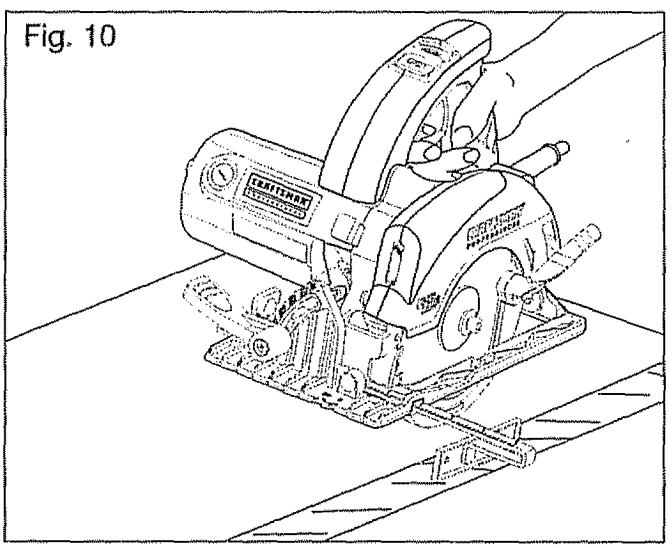


Fig. 10

Using the edge guide (Fig. 10)

Always use a guide when making long or wide rip cuts with your saw. You can use either a straight edge or use the edge guide that was included with the saw.

⚠ **WARNING:** Always disconnect the saw from the power source when assembling parts, changing blades, and making adjustments. Failure to obey this warning could cause serious personal injury.

1. Disconnect the saw from the power source.
2. Position the edge guide so that the ruler side of the arm is facing up. Slide the arm of the edge guide through the mounting slots at the front of the saw base.
3. Adjust the edge guide to the desired width of cut.
4. Tighten the edge-guide lock knob.

When using the edge guide, position the face of the edge guide firmly against the edge of the workpiece. This will help make a true cut without binding the blade. The edge of the workpiece must be straight for the cut to be straight. Use caution to prevent the blade from binding in the cut.

BEVEL CUTTING

The cutting angle can be adjusted to any setting between 0° and 48°. Since blade thicknesses vary and different angles require different settings, always make a trial cut in scrap material along a guideline to determine how much you should offset the guideline on the workpiece to be cut.

To adjust the bevel setting

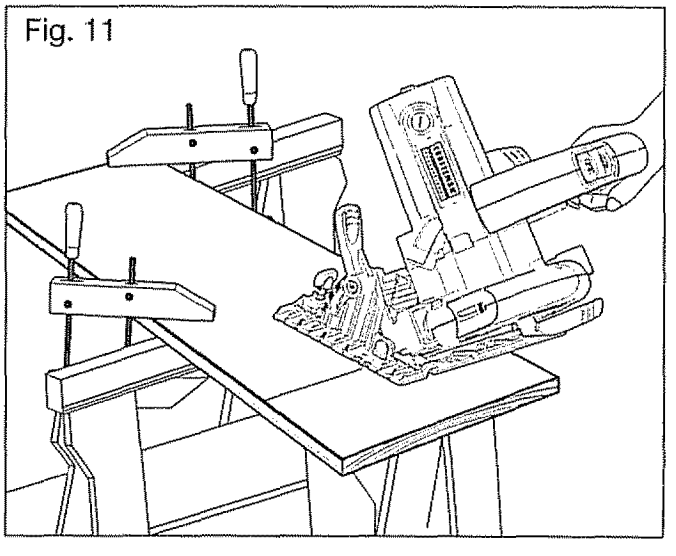
⚠ **WARNING:** Always disconnect the saw from the power source when assembling parts, changing blade and making adjustments. Failure to obey this warning could cause serious personal injury.

1. Disconnect the saw from the power source.
2. Loosen the bevel-adjustment knob by rotating the knob counterclockwise.
3. Raise the motor-housing side of the saw until the bevel indicator reaches the desired setting on the bevel scale (0°- 48°).
4. Tighten the bevel-adjustment knob by rotating the knob clockwise.

Making a bevel cut (Fig.11)

1. Secure the workpiece with clamps. When making a bevel cut, hold the saw firmly.
2. Rest the front edge of the base on the workpiece. Squeeze the trigger switch to start the saw. Allow the saw to reach full speed before attempting to make a cut.

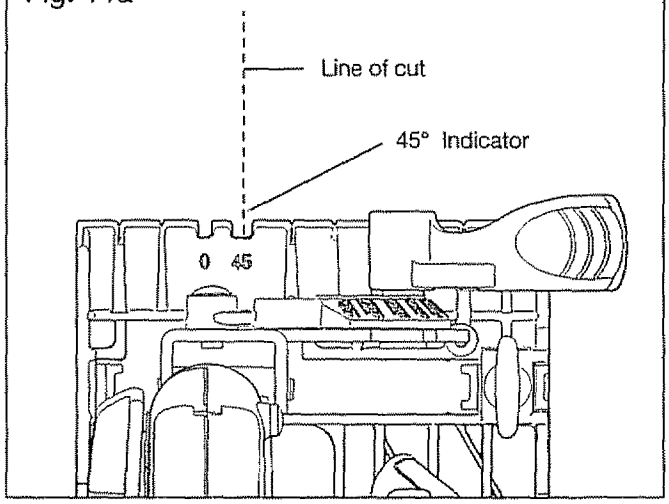
Fig. 11



3. After completing the cut, release the trigger switch and allow the blade to come to a complete stop. After the blade has stopped, remove the saw from the workpiece.

For making 45° bevel cuts, there is a notch in the saw base to help you line up the blade with the cutting line. Align your cutting line with the notch marked 45°. (Fig. 11a)

Fig. 11a



⚠ **WARNING:** Attempting bevel cut without the bevel-adjustment knob securely tightened can result in serious injury.

0°Bevel stop

The saw has a 0°bevel stop that has been factory adjusted to assure a 0°angle of the saw blade when making 90°cuts.

To check 0° bevel stop (Fig. 12)

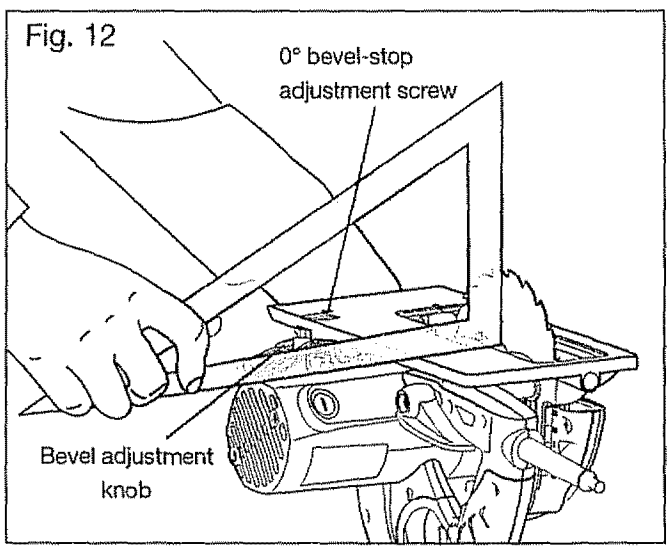
⚠ **WARNING:** Always disconnect the saw from the power source when assembling parts, changing the blade and making adjustments. Failure to obey this warning could cause serious personal injury.

1. Disconnect the saw from the power source.
2. Place the saw in an upside-down position on a workbench.
3. Using a carpenter's square, check that the saw blade is square to the base of the saw.

To adjust 0° bevel stop (Fig. 12)

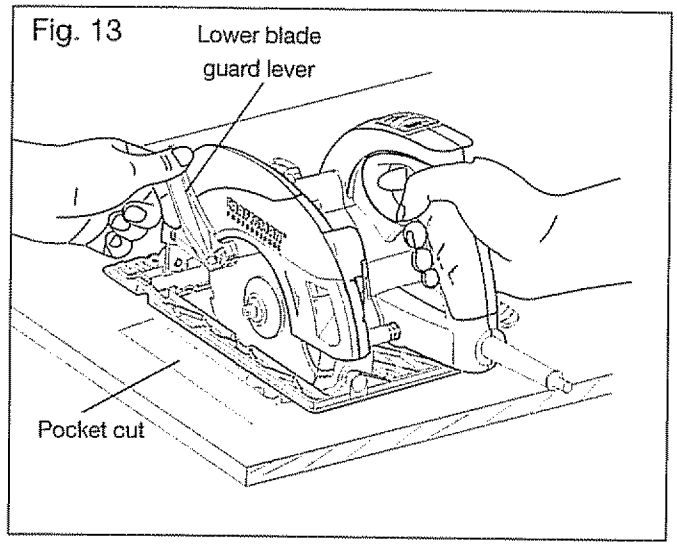
1. Disconnect the saw from the power source.
2. Loosen the bevel-adjustment knob.
3. Place the saw in an upside-down position on a workbench.
4. Using a hex key, turn the 0°bevel-stop adjusting screw until it is square with the saw blade.

Fig. 12



POCKET CUTTING (Fig. 13)

⚠ WARNING: Always adjust the bevel setting to 0° before making a pocket cut. Attempting a pocket cut at any other setting can result in loss of control of the saw, possibly causing serious injury.



1. Disconnect the saw from the power source.
2. Adjust the bevel setting to zero.
3. Set the blade to the correct depth of cut.
4. Plug the saw into a power source.
5. Swing the lower blade guard up using the lower blade guard lever.
6. Hold the lower blade guard by the lever.
7. Rest the front of the base flat against the workpiece with the rear of the handle raised, so that the blade does not touch the workpiece.
8. Start the saw and allow the blade to reach full speed.
9. Guide the saw into the workpiece, and make the cut.

⚠ WARNING: Always cut in a forward direction when making a pocket cut. Cutting in the reverse direction could cause the saw to climb up on the workpiece and back toward you, possibly causing serious injury.

10. Release the trigger switch and allow the blade to come to a complete stop.
11. Lift the saw from the workpiece.
12. Clear corners out with a hand saw or sabre saw.

⚠ WARNING: Never tie the lower blade guard in a raised position. Leaving the blade exposed could lead to serious injury.

⚠ **WARNING:** To ensure safety and reliability, all repairs should be performed by a qualified service technician at a Sears Service Center.

⚠ **WARNING:** To avoid serious personal injury, always disconnect the saw from the power source when cleaning or performing any maintenance.

Power tools that are used to work on fiber-glass boats and sports cars, wallboard, spackling compounds, or plaster are subject to accelerated wear and possible premature failure. The chips and grindings from these materials are highly abrasive to electrical tool parts, such as bearings, brushes, commutators, etc. Consequently, it is not recommended that this tool be used for extended work on any fiberglass material, wallboard, spackling compound, or plaster. During any use on these materials, it is extremely important that the tool is cleaned frequently by blowing with an air jet.

⚠ **WARNING:** Always wear safety goggles or safety glasses with side shields during power tool operation or when blowing dust. If operation is dusty, also wear a dust mask.

GENERAL MAINTENANCE

⚠ **WARNING:** Do not at any time let brake fluids, gasoline, petroleum-based products, penetrating oils, etc. come in contact with plastic parts. Chemicals can damage, weaken or destroy plastic, which may result in serious personal injury.

Periodic maintenance allows for long life and trouble-free operation. A cleaning, lubrication, and maintenance schedule should be maintained. As a common preventive maintenance practice, follow these recommended steps:

- When work has been completed, clean the tool to allow smooth functioning of the tool over time.
- Use clean, damp cloths to wipe the tool.
- Check the state of all electrical cables.
- Keep the motor's air openings free from oil, grease, and sawdust or woodchips.
- Store the tool in a dry place.
- Be certain that all exposed, moving parts are well lubricated, particularly after lengthy exposure to damp and/or dirty conditions.

Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to damage from commercial solvents and may be damaged by their use. Use clean cloths to remove dirt, dust, oil, grease, etc.

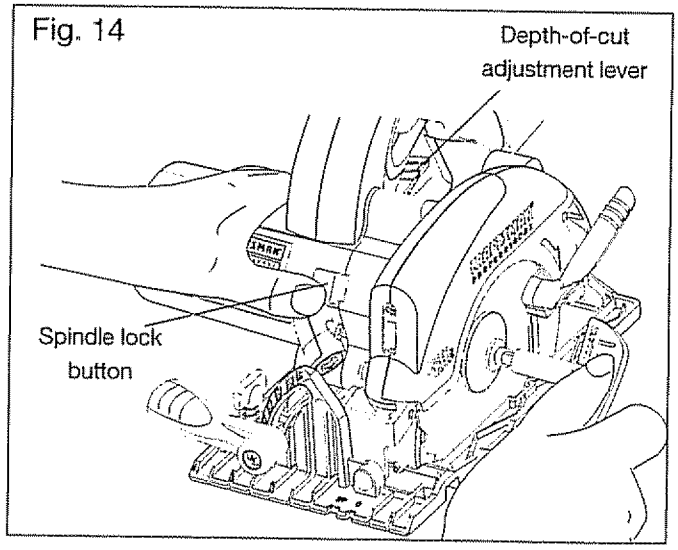
LUBRICATION

All of the bearings in this tool are lubricated with a sufficient amount of high-grade lubricant for the life of the tool under normal operating conditions. Therefore, no further lubrication is required.

CHANGING THE BLADE (Fig. 14)

⚠ WARNING: A 5-1/2-in. blade is the maximum blade capacity of the saw. Use only 5 1/2-in. blades when replacing worn or damaged blades. Never use a blade so thick that it does not allow the outer blade washer to engage with the flats on the spindle. Larger blades will come in contact with the blade guard, while thicker blades will prevent the blade screw from securing the blade on spindle. Either of these situations could result in a serious accident.

Fig. 14



⚠ WARNING: To prevent accidental starting that could cause serious personal injury, always disconnect the tool from the power source BEFORE making any adjustments or changing accessories.

1. Disconnect the saw from the power source.
2. Loosen the depth-of-cut adjustment lever. Raise the saw to maximum height, and tighten the depth-of-cut adjustment lever.
3. Depress the spindle lock button, and place the hex key (supplied) in the blade screw. Move the hex key back and forth until you feel the spindle lock button depress further. This action locks the blade in position, so the blade screw can be removed.
4. With the spindle lock button firmly depressed, turn the blade screw clockwise to loosen the screw.
5. Raise the lower blade guard, using the blade guard lever, and hold it in the raised position.
6. Remove the blade screw, washer, outer flange, and the blade.
7. The remaining flange is the inner flange that fits around the spindle shaft; it does not need to be removed.
8. Place a new saw blade inside the lower blade guard, onto the spindle shaft and against the inner bushing washer.

NOTE: The teeth of the blade should point upward at the front the saw.

9. Replace the outer flange and washer.
10. Depress and hold the spindle lock button as you replace the blade screw and hand tighten the screw in a counterclockwise direction. Use the hex key to tighten the blade screw securely.

PARTS LIST

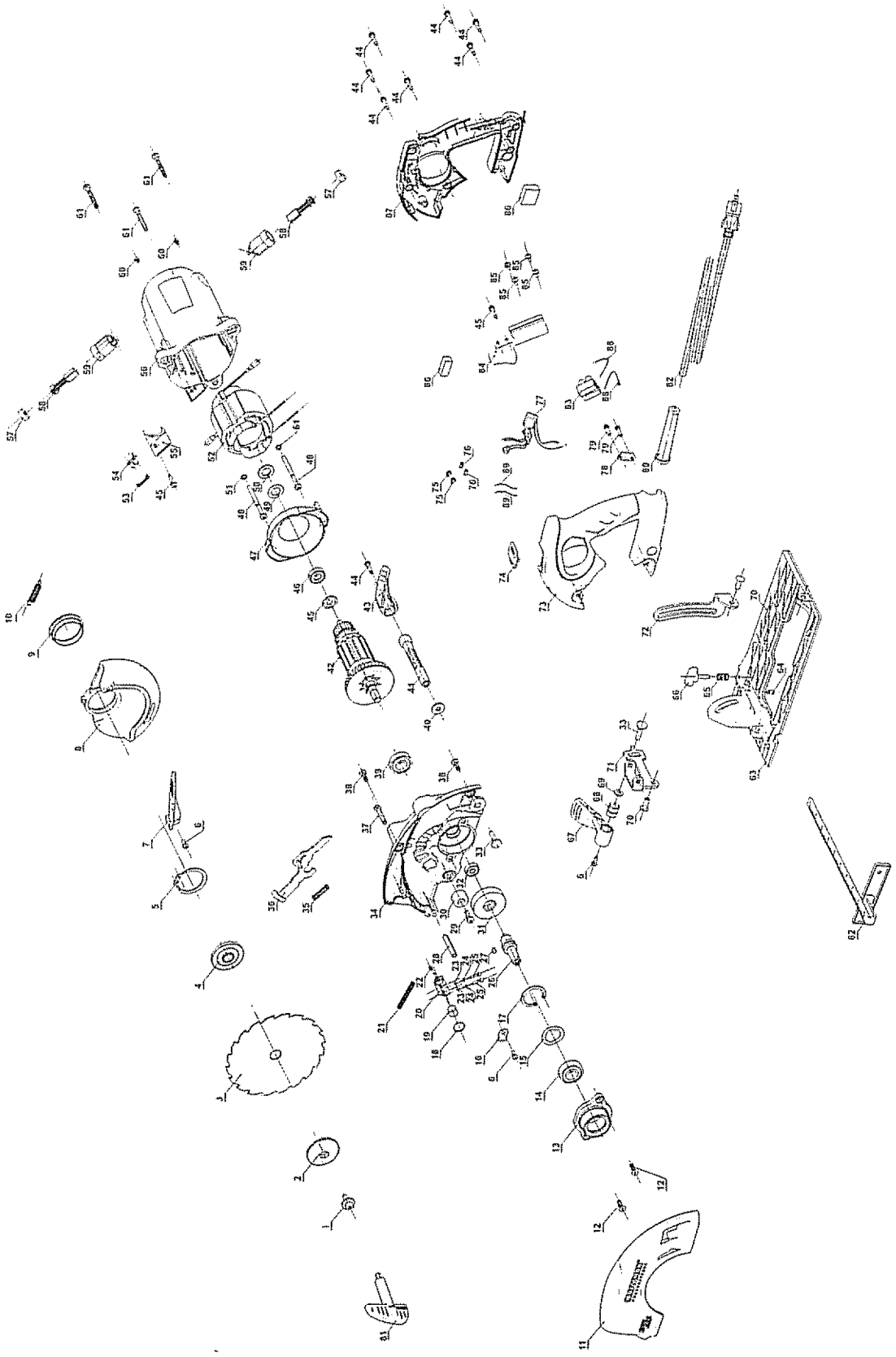
5-1/2-in. Circular Saw Model No. 320.28191 Always mention the Model Number when ordering parts for this tool.

No.	Part No.	Part Name	Quantity
01.	3550688000	Flange Bolt	1
02.	3520069000	Outer Flange	1
03.	3810376000	Blade	1
04.	3520070000	Inner Flange	1
05.	5660024000	Circlips For Shaft	1
06.	5620039000	Screw	3
07.	3123085000	Moving Guard Lever	1
08.	3420522000	Lower Guard	1
09.	3120593000	Bush	1
10.	3660081000	Spring	1
11.	3420520000	Upper Guard	1
12.	5610087000	Thread Forming Screw	2
13.	3420219000	Gear Case Cover	1
14.	5700015000	Ball Bearing	1
15.	3700258000	Wave Washer	1
16.	3700262000	Wire Holder	1
17.	5660022000	Circlips For Hole	1
18.	3121384000	Lens	1
19.	2780039000	Laser Set	1
20.	3420468000	Laser Holder	1
21.	3660069000	Spring	1
22.	5620089000	Slotted Set Screw	1
23.	5650001000	Plain Washer	2
24.	5650003000	Spring Washer	2
25.	5620006000	Hexagon Socket Screw	2
26.	3550774000	Gear Shaft	2
27.	5680003000	Key	1
28.	5670008000	Spring Pin	1
29.	5610058000	Thread Forming Screw	1
30.	3121051000	Stopper	1

No.	Part No.	Part Name	Quantity
31	3550231000	Gear	1
32	5700004000	Ball Bearing	1
33	5640155000	Bolt	2
34	3420519000	Gear Case	1
35	3660076000	Spring	1
36	3402169000	Spindle Lock	1
37	5610061000	Thread Forming Screw	1
38	5610057000	Thread Forming Screw	2
39	5700013000	Ball Bearing	1
40	5650053000	Washer	1
41	3402167000	Lock Rod	1
42	2750843000	Rotor	1
43	3123086000	Depth Adjusting Lever	1
44	5610042000	Tapping Screw	10
45	3700315000	Dust Seal	1
46	5700008000	Ball Bearing	1
47	3123089000	Fan Baffle	1
48	5610065000	Tapping Screw	2
49	3700249000	Washer	1
50	3121049000	Rubber Spring	1
51	5650015000	Spring Washer	1
52	2740243000	Stator	2
53	3123091000	Lens	1
54	4890322000	PCB Assembly	1
55	3123084000	LED Cover	1
56	3123083000	Motor Housing	1
57	3120537000	Brush Cover	2
58	4960019000	Carbon Brush	2
59	2800005000	Brush Holder	2
60	5620016000	Hexagon Socket Screw	2
61	5610062000	Thread Forming Screw	3
62	3703720000	Rip Fence	1
63	3420521000	Base Plate	1
64	5620017000	Hexagon Socket Screw	1

No.	Part No.	Part Name	Quantity
65	3660071000	Spring	1
66	3400012000	Wing Bolt	1
67	3123087000	Bevel Lever	1
68	5630197000	Square Nut	1
69	5650017000	Plain Washer	1
70	5680012000	Rivet	2
71	3703686000	Support Plate	1
72	3703687000	Depth Bracket	1
73	3320421000	Left Handle ASSY	1
74	3122922000	Laser Button	1
75	4930013000	Receptacle	2
76	4930012000	Terminal	2
77	2822246000	Transformer Assy	1
78	3700285000	Cord Anchorage	1
79	5610031000	Thread Forming Screw	2
80	3121028000	Cord Guard	1
81	3402168000	Key	1
82	4810002000	Power cord	1
83	4930004000	Connecter	1
84	4870036000	Switch	1
85	5620035000	Screw	4
86	3700540001	Sponge	2
87	3320422000	Right Handle ASSY	1
88	4860008000	Inner Wire	2
89	4860008009	Inner Wire	2

5-1/2-in. Circular Saw Model No. 320.28191



NOTES

NOTES

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